10/716,265 JB 06/07/2010

Amendments to the Specification:

Please replace the paragraph starting on page 5, line 8 with the following paragraph

In the MPEG standard, the quantizer is generally created with a base quantizer value and a quantizer adjustment. In a base quantizer adjustment stage, the encoder calculates a buffer occupancy accumulator which is defined as difference between the actual number of bits used to encode a frame and the requested bits for the previous video frame of the same video frame type. The buffer occupancy accumulator is used to improve the next estimate. In order to achieve a smooth quality transition, the system of the present invention limits the changes to the buffer occupancy accumulator with respect to the target number of bits of the current frame. For example, in one embodiment, the buffer occupancy accumulator for P-frames is allowed to change a maximum of 40 % from the previous ~~the~~ buffer occupancy accumulator and for I-frames (Intra-frames) the buffer occupancy accumulator is only allowed to change a maximum of 15 % from the previous ~~the~~ buffer occupancy accumulator. Limiting the change of the buffer occupancy accumulator will prevent one odd significantly different frame from significantly changing the quantization.

JB *Please replace the paragraph starting on page 5, line ~~2~~ 23 with the following paragraph*

Furthermore, an encoder implementing the teachings of the present invention will ~~improved~~ improve upon the quantizer adjustment by making more accurate estimates of the amount information needed to encode each macroblock. In the reference MPEG-2 Test Model 5 implementation, a video encoder employs a uniform bit allocation model for all different video frame types such that the expected number of bits per macroblock is constant whether the frame is an intra-frame or an inter-frame. In the system of the present invention, the digital video